

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method to block data transmission interference from an input of a receiver in a hearing instrument, comprising:

receiving an acoustic-based signal representative of sound received at a microphone system;

determining if a trigger associated with a data transmission has occurred;

presenting a signal representative of the acoustic-based signal to the input of the receiver when the trigger has not occurred such that the receiver converts the acoustic-based signal into an output acoustic signal; [[and]]

blocking the signal representative of the acoustic-based signal from the input of the receiver when the trigger has occurred such that data transmission interference is blocked from being converted into the output acoustic signal; and

controlling a presentation of a signal to the input of the receiver such that, when the trigger associated with a data transmission has occurred, the receiver either:

does not generate an output acoustic signal, or

generates an output acoustic signal representative of a substitute waveform generated from data stored in a memory of the hearing instrument.

2. (Original) The method of claim 1, further comprising generating the trigger associated with the wireless transmission when a wireless transmission carrier has been sensed.

3. (Original) The method of claim 1, further comprising generating the trigger associated with the wireless transmission in anticipation of the wireless transmission.

4. (Original) The method of claim 1, further comprising generating the trigger associated with the wireless transmission for at least a portion of a wireless transmission duration.

- 5-6. (Canceled)

7. (Currently Amended) The method of claim 1 ~~[[6]]~~, wherein ~~presenting a signal representative of a substitute waveform to the input of the receiver includes presenting a predetermined ambient waveform to the input of the receiver such that the receiver generates the output acoustic signal representative of the substitute waveform stored in the memory of the hearing instrument includes~~ an output acoustic signal representative of a preprogrammed ambient sound.

8. (Currently Amended) The method of claim 1 ~~[[6]]~~, further comprising:
sampling the signal representative of the acoustic-based signal; and
storing data ~~in a computer-readable medium~~ to form a sample waveform,
wherein ~~presenting a signal representative of a substitute waveform to the input of the receiver when the trigger has occurred includes presenting a~~ the output acoustic signal representative of the substitute waveform generated from data stored in the memory of the hearing instrument includes an output acoustic signal representative of the sample waveform to the input of the receiver when the trigger has occurred.

9. (Currently Amended) The method of claim 1 ~~[[6]]~~, wherein ~~presenting a signal representative of a substitute waveform to the input of the receiver when the trigger has occurred includes presenting a signal having~~ the output acoustic signal representative of the substitute waveform generated from data stored in the memory of the hearing instrument has a duration of 1 to 50 ms.

10. (Currently Amended) The method of claim 1, ~~further comprising controlling a presentation of signal to the input of the receiver such that, when the trigger associated with a data transmission has occurred, the receiver generates one of:~~

~~—— no acoustic signal; and~~

~~—— a substitute acoustic signal based on wherein the substitute waveform is generated from sampled data for a detected acoustic signal that precedes the data transmission.~~

11. (Currently Amended) The method of claim 1, ~~further comprising controlling a presentation of a signal to the input of the receiver such that, when the trigger associated with a data transmission has occurred, the receiver generates one of:~~

~~—— no acoustic signal; wherein the output acoustic signal representative of the substitute waveform includes a first substitute acoustic signal corresponding to a predetermined ambient sound; and or a second substitute acoustic signal based on a detected acoustic signal that precedes the data transmission.~~

12. (Currently Amended) A hearing instrument, comprising:

a data receiver to receive a data transmission;

a microphone system to receive an input acoustic signal and generate an acoustic-based signal;

a hearing instrument receiver to receive and convert a processed signal representative of the acoustic-based signal into an output acoustic signal; and

means to block for blocking the signal representative of the acoustic-based signal for at least a portion of a time period when the data receiver receives a data transmission such that the output acoustic signal does not include noise attributed to the data transmission and means for controlling a presentation of a signal to the input of the receiver such that, when the trigger associated with a data transmission has occurred, the receiver either:

does not generate an output acoustic signal, or

generates an output acoustic signal representative of a substitute waveform generated from data stored in a memory of the hearing instrument.

13. (Currently Amended) The hearing instrument of claim 12, ~~further comprising a computer-readable medium, including data representative of a substitute waveform signal,~~ wherein the means for blocking and the means for controlling to block the acoustic-based signal includes means to substitute for substituting the substitute waveform signal for the processed signal for at least a portion of a period when the data receiver receives a data transmission such that, when the substitute waveform is substituted for the processed signal, the hearing instrument receiver receives and converts the substitute waveform signal into an output acoustic signal.

14. (Currently Amended) The hearing instrument of claim 13, further comprising means for sampling to sample the signal representative of the acoustic-based signal before the data transmission and form a corresponding sample waveform signal, wherein the means for substituting to substitute the substitute waveform signal for the processed signal includes means for substituting to substitute the processed signal with the sample waveform signal such that the hearing instrument receiver receives and converts the sample waveform signal into an acoustic signal similar to an output acoustic signal generated prior to the data transmission.

15. (Currently Amended) A hearing instrument, comprising:

- a data receiver to receive a data transmission;
- a microphone system to receive an input acoustic signal and generate an acoustic-based signal;
- a switch having a first input, a second input and an output, the switch being configured to selectively connect one of the first input and the second input to the output;
- a first signal path to carry a signal representative of the acoustic-based signal from the microphone system to the first input of the switch;
- a hearing instrument receiver to convert an output signal from the output of the switch into an output acoustic signal;
- a memory including data stored in the memory representative of a substitute waveform signal;

a second signal path to carry a signal representative of the substitute waveform signal from the memory to the second input of the switch; and

a controller to receive a trigger signal indicative of a data transmission occurrence, and to communicate with the switch to selectively disconnect the first input from the output during at least a portion of the data transmission occurrence such that interference associated with the data transmission occurrence is not transferred to the hearing instrument receiver and connect the second input to the output during at least a portion of the data transmission occurrence.

16. (Canceled)

17. (Currently Amended) The hearing instrument of claim 15 ~~claim 16~~, wherein the ~~computer-readable-medium data stored in the memory~~ includes data representative of a predetermined ambient waveform signal to function as the substitute waveform signal.

18. (Currently Amended) The hearing instrument of claim 15 ~~claim 16~~, further comprising a sampling module to sample the output signal and form a sample waveform signal, wherein the ~~computer-readable-medium data stored in the memory~~ includes data representative of the sample waveform signal to function as the substitute waveform signal.

19. (Currently Amended) The hearing instrument of claim 15 ~~claim 16~~, further comprising:
a digital signal processing module to receive and process the acoustic-based signal from the microphone system and to determine waveform morphology information about the acoustic-based signal; and

a waveform signal processing module to receive the substitute waveform signal from the computer-readable medium, to receive the waveform morphology information from the digital signal processing module, and to adjust morphological parameters of the substitute waveform signal based on the waveform morphology information from the digital signal processing module.

20. (Original) The hearing instrument of claim 15, wherein at least one of the switch and the controller is implemented using software.

21. (Original) The hearing instrument of claim 15, wherein at least one of the switch and the controller is implemented using hardware.

22. (Currently Amended) A hearing instrument, comprising:

a wireless transceiver to receive a wireless data transmission and convert the wireless data transmission into a data signal;

a controller to receive the data signal and store programming instructions contained in the data signal for the hearing instrument in a program memory module;

a trigger generator to send a trigger signal to the controller, the trigger signal corresponding to a wireless data transmission occurrence;

a microphone system to receive an acoustic signal and convert the acoustic signal into an analog acoustic-based signal;

an analog-to-digital converter to convert the analog acoustic-based signal into a digital acoustic-based signal;

a digital signal processing module to transform the digital acoustic-based signal into a processed acoustic-based signal;

a blocking module to selectively block the processed acoustic-based signal from passing as a digital output signal, wherein in response to the trigger signal, the controller operates to selectively block the processed acoustic-based signal from passing as the digital output signal, and further operates to control a presentation of a signal to the input of the receiver such that either the receiver does not generate an output acoustic signal or the receiver generates an output acoustic signal representative of a substitute waveform generated from data stored in a memory of the hearing instrument;

a digital-to-analog converter to convert the digital output signal into an analog output signal; and

a receiver to convert the analog output signal into an acoustic signal.

23. (Canceled)

24. (Currently Amended) The hearing instrument of claim 22 ~~claim 23~~, wherein the ~~waveform data stored in the memory module~~ includes data to construct a predetermined substitute waveform signal representative of ambient sound.

25. (Currently Amended) The hearing instrument of claim 22 ~~claim 23~~, further comprising a sample module to sample a preceding digital output signal corresponding to a preceding processed acoustic-based output signal, and to store a sample waveform corresponding to the preceding digital output signal as data in the ~~waveform~~ memory module for use as in generating the substitute waveform ~~signal~~.

26. (Currently Amended) The hearing instrument of claim 22 ~~claim 23~~, wherein ~~the a~~ waveform signal processing module is configured to receive morphology information corresponding to a previous acoustic-based signal, and to adjust morphological parameters of the substitute waveform ~~signal to form the processed waveform signal~~.

27. (Currently Amended) The hearing instrument of claim 26, wherein the morphological parameters that are capable of being adjusted by the waveform signal processing module, ~~includes~~ include: phase, frequency and amplitude.

28. (Currently Amended) The hearing instrument of claim 26, wherein the waveform signal processing module~~[[,]]~~ includes a module to adjust a length of the substitute waveform~~-signal~~.

29. (Currently Amended) The hearing instrument of claim 26, wherein the waveform signal processing module~~[[,]]~~ includes a module to smooth ends of the substitute waveform to connect a first end of the substitute waveform to a preceding acoustic-based waveform and to connect a second end of the substitute waveform to a succeeding acoustic-based waveform.

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30. (Currently Amended) The hearing instrument of claim 22 ~~claim 23~~, wherein the substitute waveform ~~signal~~ has a duration of 1 to 50 ms.
31. (Original) The hearing instrument of claim 22, wherein the trigger signal corresponds to an entire time period associated with the wireless data transmission.
32. (Original) The hearing instrument of claim 22, wherein the trigger signal corresponds to at least a portion of a time period associated with the wireless data transmission.
33. (Original) The hearing instrument of claim 22, further comprising a carrier sense module to sense a carrier associated with the wireless data transmission, wherein the trigger signal corresponds a sensed carrier.